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Proposed Maximum Residue Limit PMRL2016-63

# Fenpyroximate

*(publié aussi en français)*

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) is proposing to establish maximum residue limits (MRLs) for fenpyroximate on various commodities to permit the import and sale of foods containing such residues.

Fenpyroximate is an insecticide currently registered in Canada for use on Fruiting Vegetables (Crop Group 8-09) and cucumbers both grown in greenhouses.

The PMRA must determine the quantity of residues that are likely to remain in or on the imported food commodities when fenpyroximate is used according to label directions in the exporting country, and that such residues will not be a concern to human health. This quantity is then legally established as an MRL on the corresponding imported commodity. An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for fenpyroximate is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRL is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to be added to the MRLs already established for fenpyroximate, are as follows.

**Table 1 Proposed Maximum Residue Limits for Fenpyroximate**

| Common Name | Residue Definition | MRL (ppm)[1] | Food Commodity |
|---|---|---|---|
| Fenpyroximate | 1,1-dimethylethyl 4-[[[(*E*)-[(1,3-dimethyl-5-phenoxy-1*H*-pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate<br><br>and<br><br>1,1-dimethylethyl 4-[[[(*Z*)-[(1,3-dimethyl-5-phenoxy-1*H*-pyrazol-4-yl)methylene]amino]oxy]methyl]benzoate | 44 | Tea (dried leaves) |
| | | 10 | Citrus oil; hops (dried) |
| | | 7.0 | Peppermint tops; spearmint tops |
| | | 2.0 | Stone fruits (crop group 12-09) |
| | | 1.0 | Small fruits vine climbing, except kiwifruit (crop subgroup 13-07F); low growing berries (crop subgroup 13-07G) |
| | | 0.50 | Citrus fruits (crop group 10R) |

| Common Name | Residue Definition | MRL (ppm)[1] | Food Commodity |
|---|---|---|---|
| | | 0.40 | Edible podded snap beans |
| | | 0.30 | Pome fruits (crop group 11-09) |
| | | 0.15 | Avocados; black sapotes ; canistels; mamey sapotes; mangos; papayas; sapodillas; star apple |
| | | 0.10 | Tuberous and corm vegetables (crop subgroup 1C); melon (crop subgroup 9A); tree nuts (crop group 14); pistachios; undelinted cottonseeds |
| | | 0.05 | Field corn flour; refined corn oil |
| | | 0.02 | Field corn; popcorn grain |

[1] ppm = parts per million

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

**International Situation and Trade Implications**

Table 2 compares the MRLs proposed for fenpyroximate in Canada with corresponding American tolerances and Codex MRLs[1]. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food and Feed website, by pesticide or commodity.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

**Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)**

| Food Commodity | Canadian MRL (ppm) | American Tolerance (ppm) | Codex MRL (ppm) |
|---|---|---|---|
| Avocado | 0.15 | 0.15 | 0.2 |
| Small fruits vine climbing, except kiwifruit (CSG 13-07F) | 1.0 | 1.0 | 0.1 (grapes)<br>0.3 (raisins) |
| Melon (CSG 9A) | 0.10 | 0.10 | 0.05 |
| Tuberous and corm vegetables (CSG 1C) | 0.10 | 0.10 | 0.05 |
| Tea (dried leaves) | 44 | 20 | Not Established[1] |
| Stone fruits (CG 12-09) | 2.0 | 2.0 | 0.4 (except cherries)<br>2.0 (cherries)<br>0.7 (prunes) |
| Low growing berries (CSG 13-07G) | 1.0 | 1.0 | 0.8 |
| Tree nuts (CG 14) | 0.10 | 0.10 | 0.05 |

[1]There is an MRL of 40 ppm for fenpyroximate residues in/on tea in Japan.

**Next Steps**

The PMRA invites the public to submit written comments on the proposed MRLs for fenpyroximate up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

# Appendix I

**Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits**

Residue data for fenpyroximate in various crops were submitted to support the maximum residue limits on imported crops. In addition, a processing study in treated apples, cottonseed, grapes, mint tops, plums, potatoes, strawberries, tomatoes and oranges were reviewed to determine the potential for concentration of residues of fenpyroximate into processed commodities.

**Maximum Residue Limits**

The recommendation for maximum residue limits (MRLs) for fenpyroximate was based upon the residues observed in crop commodities treated according to label directions in the exporting country, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for various imported crops.

**Table A1 Summary of Field Trial and Processing Data Used to Support MRLs**

| Commodity | Application Method/ Total Application Rate (g a.i./ha)[1] | Preharvest Interval (days) | Lowest Average Field Trial Residues (ppm) | Highest Average Field Trial Residues (ppm) | Experimental Processing Factor |
|---|---|---|---|---|---|
| Potatoes | Foliar application / 222-241 | 6-7 | <0.10 | <0.10 | No quantifiable residues observed when treated at exaggerated rate |
| Tomatoes | Foliar application / 222-278 | 1 | <0.055 | 0.170 | No concentration was observed in food commodities |
| Bell Peppers | Foliar application / 225-351 | 1 | <0.050 | 0.127 | Not required |
| Non-bell Peppers | Foliar application / 224-231 | 1 | <0.050 | 0.120 | |
| Cantaloupes | Foliar application / 221-226 | 2-4 | <0.050 | <0.050 | Not required |
| Oranges | Foliar application / 437-504 | 14 | 0.074 | 0.313 | Orange oil (12x) |

| Commodity | Application Method/ Total Application Rate (g a.i./ha)[1] | Preharvest Interval (days) | Lowest Average Field Trial Residues (ppm) | Highest Average Field Trial Residues (ppm) | Experimental Processing Factor |
|---|---|---|---|---|---|
| Lemons | Foliar application / 448-504 | 14 | 0.097 | 0.228 | No concentration in orange juice |
| Grapefruits | Foliar application / 448-493 | 14 | 0.058 | 0.176 | |
| Apples[2] | Foliar application / 224 | 14 | 0.03 | 0.07 | No concentration in apple juice |
| Pears[2] | Foliar application / 111-450 | 14 | 0.100 | 0.355 | Not required |
| Peaches | Foliar application / 218-231 | 7 | 0.109 | 0.245 | Not required |
| Plums | Foliar application / 217-227 | 7 | 0.100 | 0.321 | Dried prune plums (1.7x) |
| Cherries | Foliar application / 224 | 7 | 0.143 | 0.928 | Not required |
| Strawberries | Foliar application / 221-233 | 1 | 0.055 | 0.555 | No concentration was observed in food commodities |
| Almonds | Foliar application / 447-451 | 14 | <0.10 | <0.10 | Not required |
| Pecans | Foliar application / 449-460 | 14 | <0.10 | <0.10 | Not required |
| Walnuts | Foliar application / 445-452 | 14 | <0.10 | <0.10 | Not required |
| Avocados | Foliar application / 204-231 | 1 | <0.05 | 0.10 | Not required |
| Cottonseeds | Foliar application / 221-231 | 14-18 | <0.02 | 0.039 | No concentration was observed in food commodities |
| Cucumber | Foliar application / 218-225 | 1 | <0.100 | 0.220 | Not Required |

| Commodity | Application Method/ Total Application Rate (g a.i./ha)[1] | Preharvest Interval (days) | Lowest Average Field Trial Residues (ppm) | Highest Average Field Trial Residues (ppm) | Experimental Processing Factor |
|---|---|---|---|---|---|
| Field corn | Foliar application / 216-230 | 13-14 | <0.02 | <0.02 | Refined oil (2.3x), Corn flour (2.7x) No concentration in corn starch or meal |
| Grapes | Foliar application / 213-235 | 14 | <0.05 | 0.24 | Raisins (2.7x) No concentration in grape juice |
| Hops | Foliar application / 356-367 | 13-15 | 1.3 | 3.8 | Not required |
| Mint | Foliar application / 226-234 | 1 | 0.55 | 2.50 | No concentration was observed in mint oil |
| Snap beans | Foliar application / 217-227 | 1 | <0.100 | 0.240 | Not required |
| Tea[2] | Foliar application / 200 | 14 | 2.98 | 3.98 | Not required |

[1] g a.i./ha = grams of active ingredient per hectare
[2] Residues were scaled according to the application rates for the OECD Calculator using the Proportionality Concept.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of fenpyroximate. Residues of fenpyroximate in these imported crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.